REMARKS

Favorable reconsideration of this application is respectfully requested in view of amendments above and the following remarks.

Status of Claim

Claims 1, 2, 4-8, 10-22, and 24-27 are pending in the present application of which claims 1, 8, 15, and 21 are independent.

Claims 1, 4, 8, and 21 are amended above.

Summary of the Office Action

Claim 1, 2, 4-8, 10-22, and 24-27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ikeda et al. (USPN 5,574,279) in view of Ried (USPN 5,856,672).

Claims 15-20 were withdrawn from allowance.

Claim Rejections Under 35 U.S.C. §103(a)

The test for determining if a claim is rendered obvious by one or more references for purposes of a rejection under 35 U.S.C. § 103 is set forth in *KSR International Co. v. Teleflex Inc.*, 550 U.S._, 82 USPQ2d 1385 (2007):

> "Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." Quoting *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966).

As set forth in MPEP 2143.03, to ascertain the differences between the prior art and the claims at issue, "[a]ll claim limitations must be considered" because "all words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385. According to the Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in view of *KSR International Co. v. Teleflex Inc.*, Federal Register, Vol. 72, No. 195, 57526, 57529 (October 10, 2007), once the *Graham* factual inquiries are resolved, there must be a determination of whether the claimed invention would have been obvious to one of ordinary skill in the art based on any one of the following proper rationales:

> (A) Combining prior art elements according to known methods to yield predictable results; (B) Simple substitution of one known element for another to obtain predictable results; (C) Use of known technique to improve similar devices (methods, or products) in the same way; (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results; (E) ''Obvious to try''—choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art; (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. *KSR International Co. v. Teleflex Inc.*, 550 U.S._, 82 USPQ2d 1385 (2007).

Furthermore, as set forth in *KSR International Co. v. Teleflex Inc.*, quoting from *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006), "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasonings with some rational underpinning to support the legal conclusion of obviousness."

Therefore, if the above-identified criteria and rationales are not met, then the cited reference(s) fails to render obvious the claimed invention and, thus, the claimed invention is distinguishable over the cited reference(s).

Claim 1, 2, 4-8, 10-22, and 24-27

Claim 1, 2, 4-8, 10-22, and 24-27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ikeda in view of Ried.

Claim 1 recites, "wherein a first pair of the flexible extensions are configured to apply a voltage to the second electrode." Claim 1 has been amended to recite this feature which was previously included in claim 4. The Applicant addresses this feature based on the Examiner's previous rejection of claim 4 regarding this feature. The Examiner alleges this feature is taught by Ikeda column 4, lines 56-60 and column 6, lines 48-53. The sections cited by the Examiner simply disclose that there is a voltage application between the two electrodes. The Examiner alleges Ikeda's beams 9 are equivalent to the "flexible extensions," and alleges Ikeda's upper driving electrode 7 is equivalent to the "second electrode." However, Ikeda does not disclose the beams 9 are configured to apply a voltage to the upper driving electrode 7. Further, Ikeda does not teach that beams 9 are flexible. Thus, Ikeda in view of Ried, both singularly and in combination, fail to teach or suggest a first pair of the flexible extensions are configured to apply a voltage to the second electrode.

Claim 1 recites, "wherein the second electrode is supported by a plurality of flexible extension members." The Examiner alleges that this feature is taught by Ikeda Figure 3A, element 9. Figure 3A discloses two beams 9 supporting a flat plate-shaped driving unit 8 (see Ikeda column 4, lines 38-63). An upper driving electrode 7 is formed on the upper face of the flat plate-shaped driving unit 8. The Examiner alleges beams 9 are equivalent to the extension members, however, the references do not disclose or suggest extension members that are flexible. Thus, Ikeda in view of Ried, both singularly and in combination, fail to

teach or suggest the second electrode is supported by a plurality of flexible extension members.

Independent claims 8 and 21, and dependent claim 24 recite features similar to claim 1 and are believed to be allowable for at least the reasons stated above regarding claim 1.

Further, claim 8 recites, "linear acting electrostatic motor means for selectively drawing the probe out of engagement with the medium[.]" The Examiner alleges that this feature is taught by Ikeda column 9, lines 8-40 and Fig. 11. The portions cited by the Examiner disclose a servo circuit 42, which applies a voltage to the fixed electrode of the probe 51 in the course of the scanning operation in order to control the height of the tip 54 in the Z-axis direction, "so as to obtain a constant tunneling current." Thus, the servo circuit 42 of Ikeda is only used to control the height of tip 54 of probe 51 while the probe is engaged in the medium. Ikeda does not disclose that the servo circuit 42 is used to draw the probe out of engagement with the medium. Indeed, such a function would be contrary to the teachings of Ikeda since the servo circuit is used in order to obtain a constant tunneling current.

Independent claim 15 recites features similar to those described above regarding claim 8 and is believed to be allowable for at least the reasons mentioned regarding claim 8.

Further, claim 15 recites, "configuring one pair of flexures to be integral with the second electrode and a second pair of flexures to be connected to the second electrode through an electrically insulative member." The Examiner previously stated that this feature was the basis for claim 15 being allowable. In rejecting claim 15 in the current Office Action, the Examiner groups claims 15 and 8 together, and addresses only the features of claim 8. The Examiner fails to address this feature of claim 15, and the references fail to teach or suggest this feature.

Claim 4 recites, "a heater disposed on the second electrode[.]" Claim 4 has been amended to recite this feature which was previously included in claim 1. The Applicant addresses this feature based on the Examiner's previous rejection of claim 1 regarding this feature. The Examiner admits that Ikeda does not disclose a heater disposed on the second electrode. The Examiner alleges this feature is taught by Ried column 9, lines 33-57. The section of Ried cited by the Examiner discloses a thermomechanical data recording system which includes a cantilever. The cantilever 102 is connected to actuator 112 that may be piezoelectric, electrostatic or electromagnetically driven (Ried column 6, lines 5-7). The cantilever of the thermomechanical data recording system contains a tip 104 which is heated through resistive heating. The resistive heater is formed by a highly-doped and a lightly-doped boron region extending the length of the cantilever. However, the lightly-doped boron region 125, which the Examiner alleges is equivalent to the heater of claim 4, is disposed on the cantilever. The lightly-doped boron region 125 is not disposed on the second electrode as recited by claim 4. Thus, Ried and Ikeda, singularly and in combination, fail to teach or suggest this feature.

Furthermore, it would not have been obvious to one of ordinary skill in the art to apply the heater of Ried to the invention of Ikeda. Ikeda does not disclose using a heat sensitive medium for recording so a heater would be unnecessary. The Examiner states that the motivation for modifying Ikeda to have a heater as suggested by Ried is to convert an STM system into an AFM system. However, AFM systems do not rely on heating to function, and adding a heater to an STM system would not convert it to an AFM system. Thus, Ried cannot be applied to cure the deficiencies of Ikeda in regards to this feature, and claim 4 should be allowed.

Claim 19 recites features similar to claim 4 and is believed to be allowable for at least the reasons stated above regarding claim 4.

Claim 13 recites, "wherein the heater is electrically isolated from the second electrode and disposed proximate the probe." In rejecting claim 1, the Examiner impliedly alleges that the cantilever of Ried is equivalent to the second electrode (the Examiner alleges the heater is attached to the second electrode when the heater is attached to the cantilever). In rejecting claim 13, the Examiner cites Ried figure 1(d) which discloses the thermomechanical data recording system described above. The heater 125 disclosed in Ried is comprised of conductive material, and an electrical current from write pulse generator is directed into the heater 125. Ried does not teach or suggest electrically isolating heater 125 from the cantilever.

Accordingly, withdrawal of this rejection and allowance of the claims is respectfully requested.

Conclusion

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below. Please grant any required extensions of time and charge any fees due in connection with this request to deposit account no. 08-2025.

Respectfully submitted,

Dated: December 15, 2009 By

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